**National Transportation Safety Board**
**Washington, DC 20594**

**Brief of Accident**

**Adopted 05/28/2002**

DCA99MA060
File No. 11847 | 06/01/1999 | LITTLE ROCK, AR | Aircraft Reg No. N215AA | Time (Local): 23:51 CDT

| | |
|---|---|
| Make/Model: | McDonnell Douglas / MD-82 |
| Engine Make/Model: | P&W / JT8D-217C |
| Aircraft Damage: | Destroyed |
| Number of Engines: | 2 |
| Operating Certificate(s): | Flag Carrier/Domestic |
| Name of Carrier: | AMERICAN AIRLINES INC |
| Type of Flight Operation: | Scheduled; Domestic; Passenger Only |
| Reg. Flight Conducted Under: | Part 121: Air Carrier |

| | Fatal | Serious | Minor/None |
|---|---|---|---|
| Crew | 1 | 4 | 1 |
| Pass | 10 | 41 | 88 |

| | |
|---|---|
| Last Depart. Point: | DFW, TX |
| Destination: | Same as Accident/Incident Location |
| Airport Proximity: | On Airport |
| Airport Name: | ADAMS FIELD |
| Runway Identification: | 4R |
| Runway Length/Width (Ft): | 7200 / 150 |
| Runway Surface: | Concrete |
| Runway Surface Condition: | Wet |

| | |
|---|---|
| Condition of Light: | Night |
| Weather Info Src: | Weather Observation Facility |
| Basic Weather: | Instrument Conditions |
| Lowest Ceiling: | 5000 Ft. AGL, Overcast |
| Visibility: | 1.00 SM |
| Wind Dir/Speed: | 280 / 018 Kts |
| Temperature (°C): | 19 |
| Precip/Obscuration: | Rain |

Pilot-in-Command Age: 48

Certificate(s)/Rating(s)
Airline Transport; Multi-engine Land;
Instrument Ratings

Flight Time (Hours)

| | |
|---|---|
| Total All Aircraft: | 10234 |
| Last 90 Days: | 54 |
| Total Make/Model: | Unk/Nr |
| Total Instrument Time: | UnK/Nr |

The full report (NTSB/AAR-01-02) is available on the NTSB Web site. See http://www.ntsb.gov/Publictn/publictn.htm for details.

On June 1, 1999, at 2350:44 central daylight time,1 American Airlines flight 1420, a McDonnell Douglas DC-9-82 (MD-82), N215AA, crashed after it overran the end of runway 4R during landing at Little Rock National Airport in Little Rock, Arkansas. Flight 1420 departed from Dallas/Fort Worth International Airport, Texas, about 2240 with 2 flight crewmembers, 4 flight attendants, and 139 passengers aboard and touched down in Little Rock at 2350:20. After departing the end of the runway, the airplane struck several tubes extending outward from the left edge of the instrument landing system (ILS) localizer array, located 411 feet beyond the end of the runway; passed through a chain link security fence and over a rock embankment to a flood plain, located approximately 15 feet below the runway elevation; and collided with the structure supporting the runway 22L approach lighting system. The captain and 10 passengers were killed; the first officer, the flight attendants, and 105 passengers received serious or minor injuries; and 24 passengers were not injured.2 The airplane was destroyed by impact forces and a postcrash fire. Flight 1420 was operating under the provisions of 14 Code of Federal Regulations (CFR) Part 121 on an instrument flight rules (IFR) flight plan.

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Occurrence #1: LOSS OF CONTROL - ON GROUND/WATER
Phase of Operation: LANDING - ROLL

Findings
1. (C) FLIGHT INTO KNOWN ADVERSE WEATHER - CONTINUED - FLIGHTCREW
2. (F) FATIGUE - FLIGHTCREW
3. (C) IMPROPER DECISION - FLIGHTCREW
4. (F) PROCEDURES/DIRECTIVES - NOT COMPLIED WITH - FLIGHTCREW
5. (F) IMPROPER USE OF PROCEDURE - FLIGHTCREW

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Occurrence #2: OVERRUN
Phase of Operation: LANDING - ROLL

Findings
6. (C) SPOILER EXTENSION - NOT VERIFIED - FLIGHTCREW
7. (F) REVERSERS - EXCESSIVE - FLIGHTCREW
8. (F) IMPROPER USE OF EQUIPMENT/AIRCRAFT - FLIGHTCREW

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Occurrence #3: ON GROUND/WATER COLLISION WITH OBJECT
Phase of Operation: LANDING - ROLL

Findings
9. (F) OBJECT - APPROACH LIGHT/NAVAID

Findings Legend: (C) = Cause, (F) = Factor

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The National Transportation Safety Board determines the probable cause(s) of this accident as follows.
The flight crew's failure to discontinue the approach when severe thunderstorms and their associated hazards to flight operations had moved into the airport area and the crew's failure to ensure that the spoilers had extended after touchdown.

Contributing to the accident were the flight crew's (1) impaired performance resulting from fatigue and the situational stress associated with the intent to land under the circumstances, (2) continuation of the approach to a landing when the company's maximum crosswind component was exceeded, and (3) use of reverse thrust greater than 1.3 engine pressure ratio after landing.